Abstract

The performance of DC-DC converters with voltage, current and voltage cum current feedback controllers greatly improve their utility. Several integrated circuits are commercially available to provide linear feedback in dc-dc converters. Because of inherent nonlinearity of converters, linear feedback circuits provide good performance over a narrow range of variations of their parameters. Sliding mode controller is a nonlinear controller that can provide good performance over a wide range of variation of parameters. It is a robust controller especially suitable for variable structure systems like a converter. Example of design of a sliding mode controller for a dc-dc buck converter has been illustrated. A detailed list of references for advanced studies in this field is appended.
References

- H Guldemir Buck Converter, Dc-Dc Converter, Sliding Mode Control 2011
- S. Dhali the sliding mode control scheme provides good voltage regulation and is suitable for boost DC-to-DC conversion purposes. Iwww. ijera. com/papers/Vol2_issue1/CV21618623. pdf

Index Terms

Computer Science Circuits And Systems

Keywords

Boost Converter (dc-dc) Pulse Width Modulation Sliding Mode Controller